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2634

To: Examiner Budd**From:** Christopher A. Bennett**Fax:** 703-872-9318**Date:** March 10, 2003**Phone:** 703-308-3929**Pages:** 4**Re:** 09/834,679**CC:**

36856.457

•Comments:

Dear Examiner Budd,

Please find attached a Request for Reconsideration for U.S. Application No. 09/834,679.

Respectfully submitted,



Christopher A. Bennett
for
KEATING & BENNETT, LLP
(46,710)

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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this correspondence is being transmitted to Group Art Unit 2834, 703-872-9318, addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231

Date: March 10, 2003

Sonia V. McVean
Sonia V. McVean

PATENT
36856.457

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Tetsuo TAKESHIMA

Serial No.: 09/834,679

Filed: April 13, 2001

Title: A PIEZOELECTRIC TYPE ELECTRIC
ACOUSTIC CONVERTER

Art Unit: 2834

Examiner: M. Budd

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REQUEST FOR RECONSIDERATION

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Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In response to the Office Action dated December 9, 2002, please reconsider the above-identified application in view of the following remarks.

Claims 1, 2 and 4-8 are pending in this application.

Claims 1, 2 and 4-8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Angona et al. (U.S. 4,649,525) in view of Hayashi et al. (U.S. 5,233,256) or Sakamoto (U.S. 4,237,399). Applicant respectfully traverses this rejection.

Claim 1 recites:

"A piezoelectric type electric acoustic converter comprising:
a plurality of piezoelectric ceramic layers which are laminated to
define a laminate;
main surface electrodes disposed on front and back main surfaces
of said laminate, an internal electrode disposed between respective
ceramic layers, and all of the ceramic layers are polarized in the same
direction which is a thickness direction thereof;

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said piezoelectric type electric acoustic converter generates bending vibration in response to application of an alternating signal between the main surface electrodes and the internal electrode; and a resin layer arranged to directly contact and cover substantially all of the front and back surfaces of the laminate; wherein **said resin layer is made of a material having a Young's modulus of about 1100 MPa.**" (Emphasis added)

The piezoelectric type electric acoustic converter according to the present invention including a resin layer made of a material having a Young's modulus of about 1100 MPa obtains greatly increased sound pressure and greatly improved durability while having a very simple configuration.

The Examiner acknowledged that Angona et al., Hayashi et al. and Sakamoto fail to teach or suggest any specific Young's modulus. However, the Examiner alleged that "it has long been held that optimization of a known device (e.g. thru routine experimentation) for a specific application is within the skill expected of the routineer. Thus, the Examiner concluded that it would have been obvious to select a specific Young's modulus for the coating of Angona et al. Applicant respectfully disagrees.

MPEP 2144.05 indicates that "a particular parameter must first be recognized as a result-effective variable, i.e. a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation." In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). Angona et al. fails to teach or suggest that the potting compound (resin) 32c could or should have a specific Young's modulus, and certainly fails to recognize that the Young's modulus of the potting compound (resin) 32c is a result-effective variable. In fact, Angona et al. fails to teach or suggest anything at all regarding the Young's modulus of the potting compound (resin) 32c, and certainly fails to teach or suggest that the potting compound (resin) 32c "is made of a material having a Young's modulus of about 1100 MPa". Thus, Applicant respectfully submits that it would not have been obvious to select a specific Young's modulus for the coating of Angona et al., as alleged by the Examiner.

Hayashi et al. and Sakamoto also fail to teach or suggest anything at all about a

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Young's modulus or it being a result-effective variable.

Accordingly, Applicant respectfully submits that Angona et al., Hayashi et al. and Sakamoto, applied alone or in combination, fails to teach or suggest the unique combination and arrangement of elements recited in claim 1 of the present application.

In view of the foregoing amendments and remarks, Applicant respectfully submits that claim 1 is allowable. Claims 2 and 4-8 depend upon claim 1, and are therefore allowable for at least the reasons that claim 1 is allowable.

In view of the foregoing Amendments and Remarks, Applicant respectfully submits that this Application is in condition for allowance. Favorable consideration and prompt allowance are respectfully solicited.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

Date: March 10, 2003


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